

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Salomaa	Examiner:	UNKNOWN
Serial No.:	TO BE ASSIGNED	Group Art Unit:	TO BE ASSIGNED
Filed:	June 20, 2001	Docket No.:	796.397USW1
Title:	MONITORING OF SIGNAL WAVELENGTHS IN OPTICAL FIBRE		

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The undersigned hereby certifies that this Transmittal Letter and the paper or fee, as described herein, are being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

By: Kari Arnold

Kari Arnold

**PRELIMINARY AMENDMENT**

Box Patent Application  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Please enter the following preliminary amendment into the above-referenced application.

**ABSTRACT**

Please insert the attached abstract into the application as the last page thereof.

**CLAIMS**

Please amend claims 1-12 as follows. A clean copy of the entire set of claims is included below. A marked up copy of the amended claims is included in Appendix A.

1. (AMENDED) Method of monitoring wavelengths of optical signals travelling in an optical fibre, wherein the steps of:

conducting the optical signals to a narrowband optical filter which can be controlled by a control signal and in which the interdependence is known between the wavelength of the optical signal obtained from the output of the filter and the control signal,

converting the optical signal obtained from the output of the optical filter into an electric signal,

adjusting the filter by changing the control signal in such a way that the window formed by its pass band will slide within the wavelength range being examined,

determining the filter control signals corresponding to the peak values of the obtained electric signal, and determining the wavelengths corresponding the control signals.

2. (AMENDED) Method as defined in claim 1, wherein the filter control signal is an electric signal.

3. (AMENDED) Method as defined in claim 1, wherein the dependence of the wavelength obtained from the filter output on the filter control signal is stored in a memory in advance.

4. (AMENDED) Method as defined in claim 3, wherein the determination of filter control signals corresponding to peak values of the electric signal and the determination of corresponding wavelengths based on these is performed based on the dependence stored in the memory.

5. (AMENDED) Method as defined in claim 1, wherein the filter control signal is adjusted so that the window formed by the pass band will slide over the wavelength

range being examined.

6. (AMENDED) Method as defined in claim 1, wherein the filter control signal is adjusted so that the window formed by the pass band will be transferred to the desired wavelength.

7. (AMENDED) Arrangement for monitoring wavelengths of optical signals travelling in an optical fibre, wherein it includes:

a narrowband optical filter, which can be controlled by filter tuning, and in which the interdependence is known between the wavelength of the control signal and the wavelength of the optical signal obtained from the filter output, and to the input of which the optical signals to be examined are conducted,

a light detector, which is connected to the output of the optical filter and which converts the optical signal into an electric signal,

a control electronics circuit, which is connected on the one hand to the control input of the filter to give a filter tuning signal and on the other hand to the light detector to receive the electric signal given by it.

8. (AMENDED) Arrangement as defined in claim 7, wherein the control electronics circuit forms a control signal, the value of which scans sliding over the entire control range.

9. (AMENDED) Arrangement as defined in claim 7, wherein the control electronics circuit forms a control signal, the value of which obtains desired values only.

10. (AMENDED) Arrangement as defined in claim 7, wherein it also includes storing means storing the interdependence between the control signal and the

wavelength of the optical signal obtained from the filter output.

11. (AMENDED) Arrangement as defined in claim 8 wherein the control electronics circuit includes a microprocessor, which from the electric signal obtained from the light detector determines filter control signals corresponding to its peak values as well as the corresponding wavelengths based on these.

12. (AMENDED) Arrangement as defined in claim 7, wherein it includes an optical directional coupler, which separates a part of the light power travelling in the optical fibre to be conducted to the input of the controllable filter.

### **REMARKS**

The above preliminary amendment is made to insert an abstract page into the application and amend claims 1-12.

Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

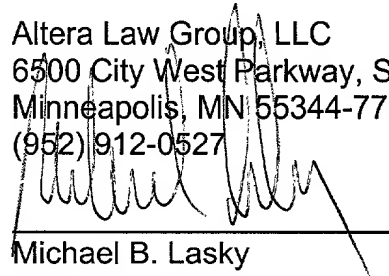
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at 952-912-0527.

Respectfully submitted,

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Date: June 20, 2001

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## Appendix A Marked Up Version of the Amended Claims

1. (AMENDED) Method of monitoring wavelengths of optical signals travelling in an optical fibre, [c h a r a c t e r i z e d in] wherein the steps of:

conducting the optical signals to a narrowband optical filter which can be controlled by a control signal and in which the interdependence is known between the wavelength of the optical signal obtained from the output of the filter and the control signal,

converting the optical signal obtained from the output of the optical filter into an electric signal,

adjusting the filter by changing the control signal in such a way that the window formed by its pass band will slide within the wavelength range being examined,

determining the filter control signals corresponding to the peak values of the obtained electric signal, and determining the wavelengths corresponding the control signals.

2. (AMENDED) Method as defined in claim 1, [c h a r a c t e r i z e d in that] wherein the filter control signal is an electric signal.

3. (AMENDED) Method as defined in claim 1, [c h a r a c t e r i z e d in that] wherein the dependence of the wavelength obtained from the filter output on the filter control signal is stored in a memory in advance.

4. (AMENDED) Method as defined in claim 3, [c h a r a c t e r i z e d in that] wherein the determination of filter control signals corresponding to peak values of the electric signal and the determination of corresponding wavelengths based on these is

performed based on the dependence stored in the memory.

5. (AMENDED) Method as defined in claim 1, [c h a r a c t e r i z e d in that] wherein the filter control signal is adjusted so that the window formed by the pass band will slide over the wavelength range being examined.

6. (AMENDED) Method as defined in claim 1, [c h a r a c t e r i z e d in that] wherein the filter control signal is adjusted so that the window formed by the pass band will be transferred to the desired wavelength.

7. (AMENDED) Arrangement for monitoring wavelengths of optical signals travelling in an optical fibre, [c h a r a c t e r i z e d in that] wherein it includes:

a narrowband optical filter [(32)], which can be controlled by filter tuning, and in which the interdependence is known between the wavelength of the control signal and the wavelength of the optical signal obtained from the filter output, and to the input of which the optical signals to be examined are conducted,

a light detector [(33)], which is connected to the output of the optical filter [(32)] and which converts the optical signal into an electric signal,

a control electronics circuit [(34)], which is connected on the one hand to the control input of the filter to give a filter tuning signal and on the other hand to the light detector to receive the electric signal given by it.

8. (AMENDED) Arrangement as defined in claim 7, [c h a r a c t e r i z e d in that] wherein the control electronics circuit forms a control signal, the value of which scans sliding over the entire control range.

9. (AMENDED) Arrangement as defined in claim 7, [c h a r a c t e r i z e d in that] wherein the control electronics circuit forms a control signal, the value of which

obtains desired values only.

10. (AMENDED) Arrangement as defined in claim 7, [c h a r a c t e r i z e d in that] wherein it also includes storing means [(35)] storing the interdependence between the control signal and the wavelength of the optical signal obtained from the filter output.

11. (AMENDED) Arrangement as defined in claim 8 [or 9, c h a r a c t e r i z e d in that] wherein the control electronics circuit includes a microprocessor, which from the electric signal obtained from the light detector determines filter control signals corresponding to its peak values as well as the corresponding wavelengths based on these.

12. . (AMENDED) Arrangement as defined in claim 7, [c h a r a c t e r i z e d in that] wherein it includes an optical directional coupler [(31)], which separates a part of the light power travelling in the optical fibre to be conducted to the input of the controllable filter.